Overview of the Major Changes to the CLP Inorganic Analytical Protocol (ILM04.0 to ILM05.0)

Requesting the Analytical Service

1. Modified data delivery requirements from 14 or 35-day contracts to a 7, 14, and 21-day turnaround contract with an option for 48-hour preliminary data submission.

2. Users may now request analysis and reporting of a single analyte (or less than the full Target Analyte List).

3. Added language enabling users to request modifications to the analytical requirements (e.g., lower detection limits).

Reporting Requirements

1. The definition of an SDG was modified to:

   - include samples received over a maximum of 7 days (was 14 days) regardless of contract turnaround time;
   - exclude PE samples as part of the maximum of 20 samples allowed in an SDG;
   - incorporate language that all samples and/or sample fractions assigned to an SDG must be scheduled under the same contractual turnaround time.

2. Modified the rounding rule from "If the figure following those to be retained is less than 5, the figure is dropped, and the retained figures are kept unchanged." to "If the figure is greater than or equal to 5 round up; otherwise, round down."

3. Added requirements for the reporting of an SDG Narrative.

4. Required laboratory to determine and report cooler temperature, even in the absence of a cooler temperature indicator bottle. This includes documenting alternative techniques used to determine cooler temperature.

5. Modified the delivery schedule for Sample Traffic Reports from five working days to 3 working days.

6. Added deliverable requirements regarding Classical Chemistry parameter data reporting forms, and Method, IPR, and MDL Studies.

7. Modified the data reporting forms by modifying field sizes, removing underscores, and presenting information below the header information in tabular format.

8. Added requirements (including delivery schedules) for electronic data audits of laboratory instrument data.

9. Modified the requirements for reporting date information on hardcopy and electronic analytical data to be Y2K compliant.

10. Added section regarding EPA's Proficiency Testing Program regarding the measurement and evaluation of laboratory and method analytical performance.

11. Added language to support an alternative means of electronic data transmission if approved in advance.

Analytes/Parameters

1. Lowered the CRDLs for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, manganese, mercury, nickel, silver, thallium, vanadium, and zinc.

2. Added Classical Chemistry parameters (Alkalinity, Ammonia, Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), Chloride, Nitrate/Nitrite, Phosphorus, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Sulfate, Hexavalent Chromium, and Total Petroleum Hydrocarbons).

Analytical Methods

1. Reorganized Exhibit D to be compliant with EPA EMMC specifications. This includes moving Exhibit E, Section V - Required QA/QC Operations - to respective sections in Exhibit D. Also consolidated the Sample Preservation and Holding Times, Sample Preparation, Sample Analysis, and QA/QC sections in Exhibit D into one place for each instrument.

2. Incorporated requirements that PE samples (along with field blanks) are not to be used for spike or duplicate sample analyses.

<u>Inorganic</u>

1. Incorporated method for ICP-MS based on EPA methods 200.8 and 6020A.

2. Removed Graphite Flame Atomic Absorption and Flame Atomic Absorption as analytical methods.

3. Removed Titration as a method for cyanide. Also consolidated two colorimetric methods based on similar sample preparation.

4. Added an air filter matrix as an option with the preparation method for ICP-AES analysis.

5. Added two sample preparation procedures for metals analysis.

6. Removed requirement for initial undiluted analysis of a sample.

<u>Classical Chemistry</u>

1. Added Classical Chemistry parameters (Alkalinity, Ammonia, Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), Chloride, Nitrate/Nitrite, Phosphorus, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), and Sulfate). These parameters are to be analyzed by Performance Based Methods where Data Quality Indicators and types of methods are specified, but the exact method is to be determined by the laboratory.

2. Incorporated methods for Hexavalent Chromium by either chelation extraction followed by atomic absorption (based on EPA methods 218.4, 7197, and 3060A) or ion chromatography with post-column derivatization (based on EPA methods 218.6, 7199, and 3060A).

3. Added method for Total Petroleum Hydrocarbons.